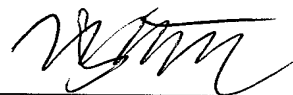


## DECLARATION

I, NOBUAKI KATO, a Japanese Patent Attorney registered No. 8517, of Okabe International Patent Office at No. 602, Fuji Bldg., 2-3, Marunouchi 3-chome, Chiyoda-ku, Tokyo, Japan, hereby declare that I have a thorough knowledge of Japanese and English languages, and that the attached pages contain a correct translation into English of the priority documents of Japanese Patent Application No. 2000-358059 filed on November 24, 2000 in the name of CANON KABUSHIKI KAISHA.

I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made, are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Signed this 20<sup>th</sup> day of December, 2006



---

NOBUAKI KATO

PATENT OFFICE  
JAPANESE GOVERNMENT

This is to certify that the annexed is a true copy  
of the following application as filed with this office.

Date of Application: November 24, 2000

Application Number: Japanese Patent Application  
No. 2000-358059

Applicant(s): CANON KABUSHIKI KAISHA

December 14, 2001

Commissioner,  
Patent Office

KOZO OIKAWA

(Seal)

Certificate No. 2001-3108560

2000-358059

**Applicant's Information**

Identification No.        [000001007]  
1. Date of Change:        August 30, 1990  
    (Reason of Change)    New Registration  
    Address:               3-30-2, Shimomaruko, Ohta-ku, Tokyo  
    Name:                  CANON KABUSHIKI KAISHA

2001-3108560

2000-358059

[Name of the Document] Patent Application

[Reference No.] 4226027

[Date] November 24, 2000

[Addressed to] Commissioner of the  
Patent Office

[International Classification] H04N 5/00

[Title of the Invention] HELP SERVER, HELPER TERMINAL  
APPARATUS, HELP SYSTEM, CONTROL  
METHOD FOR HELP SYSTEM AND STORAGE  
MEDIUM

[Number of the Claims] 28

[Inventor]  
[Domicile or Residence] c/o Canon Kabushiki Kaisha  
30-2, 3-chome, Shimomaruko,  
Ohta-ku, Tokyo

[Name] RIE SAITO

[Applicant]  
[Identification No.] 000001007

[Name] CANON KABUSHIKI KAISHA

[Attorney]  
[Identification No.] 100090273  
[Patent Attorney]

[Name] TAKAYOSHI KOKUBU

[Tel] 03-3590-8901

[Indication of Official Fee]  
[Prepayment Ledger No.] 035493

[Amount] ¥21,000

[List of Filed Materials]  
[Material] Specification 1

[Material] Drawings 1

[Material] Abstract 1

[General Power of Attorney] 9705348

[Proof requirement] necessary

CFO15963

P2000-358059

[Name of the Document] Specification

[Title of the Invention] Help Server, Helper Terminal  
5 Apparatus, Help System, Control Method for Help System  
and Storage Medium

[Claim(s)]

[Claim 1] A help server, characterized by:  
notice request means for notifying its own  
10 communication ability to a user terminal apparatus  
which inquires; and

communication ability instruction means for  
instructing the helper terminal apparatus, which  
responds to the inquiry, to responds to the inquiry in  
15 a form suitable for user needs in accordance with the  
communication ability notified by said user terminal  
apparatus.

[Claim 2] A help server according to claim 1,  
wherein said user needs include at least one of a  
20 communication fee and information fee.

[Claim 3] A help server according to claim 1 or  
2, characterized by:

notice request means for requesting to notify a  
payable fee and a terminal ability to said user  
25 terminal apparatus when an inquiry is made from a user  
terminal connected via a network;

helper terminal apparatus selection means for

selecting the helper terminal apparatus suitable to respond to the inquiry from said user terminal apparatus; and

5 session start means for starting a session after connecting the helper terminal apparatus selected by said helper terminal apparatus selection means, and said user terminal apparatus.

[Claim 4] A help server according to any one of claims 1 to 3, characterized by storage means for  
10 storing contents of a response of said helper terminal apparatus to the inquiry of said user terminal apparatus, in an answer example database.

[Claim 5] A help server according to claim 4, characterized by:

15 inquiry contents transmission means for transmitting the inquiry contents of said user terminal apparatus to the helper terminal apparatus selected by said helper terminal apparatus selection means; and

helper terminal apparatus information notice means  
20 for notifying an information list of helper terminal apparatuses having a will to replay to the inquiry contents transmitted by said inquiry contents transmission means, to said user terminal apparatus.

[Claim 6] A help server according to claim 4 or  
25 5, characterized by history list notice means for notifying information list of a similar inquiry history for the inquiry contents transmitted by said inquiry

contents transmission means if the answer example database stores such a similar inquiry history.

[Claim 7] A help server according to any one of claims 4 to 6, characterized by fee notice means for  
5 notifying an information fee desired by said helper terminal apparatus at the time of replying from the helper.

[Claim 8] A help server according to any one of claims 4 to 7, characterized by communication ability  
10 notice order means for making notify a communication ability of the helper terminal at the time of reply from said helper.

[Claim 9] A help system according to any one of claims 4 to 8, characterized by fee collecting means  
15 for taking a fee collection procedure to said user terminal apparatus.

[Claim 10] A help system according to any one of claims 4 to 9, characterized by fee payment means for taking a fee payment procedure to said helper terminal  
20 apparatus.

[Claim 11] A help server according to any one of claims 4 to 10, characterized by:

keyword extraction means for extracting keywords from an inquiry when the inquiry is received from said  
25 user terminal apparatus;

helper terminal apparatus selection means for selecting at least one of the helper terminal

apparatuses suitable for said inquiry from a plurality of helper terminal apparatuses registered beforehand in accordance with the keywords extracted by said keyword extraction means; and

5           inquiry contents transmission means for transmitting the inquiry of said user terminal apparatus to the helper terminal apparatus selected by said helper terminal apparatus selection means.

          [Claim 12] A help server according to claim 11,  
10       characterized by helper terminal apparatus information notice means for notifying a list of information of helper terminal apparatuses which responds so as to answer to the inquiry of said user terminal apparatus, to said user terminal apparatus.

15           [Claim 13] A user terminal apparatus characterized by transmission means for transmitting its own payable fee and terminal ability in accordance with an inquiry of payable fee and terminal ability from a help server.

20           [Claim 14] A user terminal apparatus according to claim 12, characterized by data transmission and receipt means for conducting a session with a helper terminal apparatus via said help server.

          [Claim 15] A help system characterized by the  
25       helper terminal apparatus according to any one of claims 1 to 12 and the user terminal apparatus according to claim 13 or 14.

[Claim 16] A control method of the help system,  
characterized by:

a notice request step of notifying its own  
communication ability to a user terminal apparatus  
5 which inquires; and

a communication ability instruction step of  
instructing the helper terminal apparatus, which  
responds to the inquiry, to respond to the inquiry in a  
form suitable for user needs in accordance with the  
10 communication ability notified by said user terminal  
apparatus.

[Claim 17] A control method of the help system  
according to claim 16, wherein said user needs include  
at least one of a communication fee and information  
15 fee.

[Claim 18] A control method of the help system  
according to claim 16 or 17, characterized by:

a notice request notice of requesting to notify a  
payable fee and a terminal ability to said user  
20 terminal apparatus when an inquiry is made from a user  
terminal connected via a network;

a helper terminal apparatus selection step of  
selecting the helper terminal apparatus suitable to  
respond to the inquiry from said user terminal  
25 apparatus; and

a session start step of starting a session after  
connecting the helper terminal apparatus selected in

said helper terminal apparatus selection step and said user terminal apparatus.

[Claim 19] A control method of the help system according to any one of claims 16 to 18, characterized  
5 by a storage step of storing contents of a response of said helper terminal apparatus to the inquiry of said user terminal apparatus, in an answer example database.

[Claim 20] A control method of the help system according to claim 19, characterized by:  
10 an inquiry contents transmission step of transmitting the inquiry contents of said user terminal apparatus to the helper terminal apparatus selected in said helper terminal apparatus selection step; and  
a helper terminal apparatus information notice  
15 step of notifying an information list of helper terminal apparatuses having a will to replay to the inquiry contents transmitted in said inquiry contents transmission step, to said user terminal apparatus.

[Claim 21] A control method of the help system  
20 according to claim 19 or 20, characterized by a history list notice step of notifying information list of a similar inquiry history for the inquiry contents transmitted in said inquiry contents transmission step if the answer example database stores such a similar  
25 inquiry history.

[Claim 22] A control method of the help system according to any one of claims 19 to 21, characterized

by a fee notice step of notifying an information fee desired in said helper terminal apparatus at the time of replying from the helper.

[Claim 23] A control method of the help system  
5 according to any one of claims 19 to 22, characterized by a communication ability notice order step of making notify a communication ability of the helper terminal at the time of reply from said helper.

[Claim 24] A control method of the help system  
10 according to any one of claims 19 to 23, characterized by a fee collecting step of taking a fee collection procedure to said user terminal apparatus.

[Claim 25] A control method of the help system according to any one of claims 19 to 24, characterized  
15 by a fee payment step of taking a fee payment procedure to said helper terminal apparatus.

[Claim 26] A control method of the help system according to any one of claims 4 to 10, characterized by:

20 a keyword extraction step of extracting keywords from an inquiry when the inquiry is received from said user terminal apparatus;

a helper terminal apparatus selection step of selecting at least one of the helper terminal  
25 apparatuses suitable for said inquiry from a plurality of helper terminal apparatuses registered beforehand in accordance with the keywords extracted in said keyword

extraction step; and

an inquiry contents transmission step of  
transmitting the inquiry of said user terminal  
apparatus to the helper terminal apparatus selected in  
5 said helper terminal apparatus selection step.

[Claim 27] A control method of the help system  
according to claim 26, characterized by a helper  
terminal apparatus information notice step of notifying  
a list of information of helper terminal apparatuses  
10 which responded so as to answer to the inquiry of said  
user terminal apparatus, to said user terminal  
apparatus.

[Claim 28] A computer readable storage medium,  
wherein a program to execute said control method of the  
15 help system is recorded.

[Detailed Description of the Invention]

[0001]

[Field of the Invention]

The present invention relates to a help server, a  
20 helper terminal apparatus, a help system, a control  
method of the help system and storage medium. The  
present invention particularly relates to the help  
system forming an information network, in which a user  
asking a question has been registered beforehand, and  
25 which connects a user terminal apparatus with a helper  
terminal apparatus for providing information to the  
user terminal apparatus, and its control method.

[0002]

[Prior Art]

Recent information processing apparatuses such as personal computers and portable information terminals  
5 are becoming more compact, lightweight and inexpensive and many persons can have such apparatuses easily. Developments of the Internet are remarkable and any information can be searched easily via the Internet.

[0003]

10 In such a case, a search engine is generally used to search desired information. However, if proper keywords for narrowing down the information to be searched are not set, the search engine extracts only unnecessary information. In addition, it often takes a  
15 long time to browse all extracted pages, so that accurate information cannot be obtained at once.

[0004]

Therefore, in order to obtain more accurate information speedily, it can be considered to use  
20 information research services, such as help system, to ask a person having expert knowledge. The help system shown here is a system like that, for example, an operator or a helper standing by at an inquiry place replies to an inquiry from a user or prepares an answer  
25 and sends it back.

[0005]

Furthermore, nowadays, this help system has been

expanded, so that an automatic help system, in which a user asking a question has been registered beforehand, and which forms an information network connecting to a helper providing information, is also proposed.

5 [0006]

In the overall structure of the automatic help system mentioned above, as shown in Fig. 10, a help server (801'), a plurality of helper terminal apparatuses (802') and a plurality of user terminal  
10 apparatuses (803') are interconnected via a network (804') such as the Internet, an intranet, and a public telephone network.

[0007]

This kind of structure eliminates a need where  
15 helpers constantly stand by at a place where the help server is installed. For example, it is possible for helpers to directly answer in a home or satellite office at which a helper works or from a portable information terminal apparatus. Therefore, this makes  
20 easier to secure helpers essential for operating the help system and makes it possible to provide prompt rely to the user as a result.

[0008]

[Problem to be Solved by the Invention]

25 Technical innovation of information processing apparatuses is now remarkable, and there are various types of information processing apparatuses and various

connection methods to networks. In such circumstances,  
there are many communication methods such as a speech  
fixed telephone, an Internet telephone, a TV telephone,  
a portable telephone, a portable TV telephone, an e-  
5 mail, and a bulletin board or chat via the Internet.  
[0009]

In the case of the above-mentioned conventional  
help system, however, the helper server (801') supports  
only a specific communication method for sending back  
10 an answer in most of the cases. Therefore, this causes  
the following problem: although a plurality of helpers,  
who have various communication abilities mentioned  
above, are ready to answer, the user has no room for  
selection so that the helper is allocated or the answer  
15 of the helper is converted to a specific communication  
method, and the user therefore cannot select the  
communication method freely.  
[0010]

Suppose, for example, a user who has a TV  
20 telephone portable terminal apparatus makes an inquiry  
in a text transmission format to the above-mentioned  
help server (801') via the network (804'). The help  
server checks the inquiry contents, selects the  
appropriate helper terminal apparatus (802'), and  
25 transfers the inquiry contents to the helper terminal  
apparatus (802').  
[0011]

Here, even when this helper had the TV telephone portable terminal apparatus, the same as the user, the above-mentioned help server (801') did not notify such to the user terminal apparatus but only sent answer  
5 contents from the helper terminal apparatus (802') to the user via the Internet or using e-mail or the like set by the help system.

[0012]

Some users wish to obtain information only free of  
10 cost, whereas some users wish to obtain information even if a high fee is requested. Some helpers wish to widely distribute their knowledge free of cost, whereas some helpers do not make information in public if a fee in compensation for it is not paid.

15 [0013]

As mentioned above, the conventional inquiry made via the help server (801') has a problem that communication abilities of information equipment cannot be utilized fully. Furthermore, the above-mentioned  
20 conventional help server (801') has a problem that although a charging system of communication fee, information fee, and the like is changeable in accordance with these various communication abilities and answer contents, the users and helpers cannot  
25 select the charging system randomly so that the helper cannot answer efficiently in a short time in a manner suitable for user needs.

[0014]

In consideration of the problems mentioned above,  
an object of the present invention is to provide a help  
system capable of efficiently sending back an answer to  
5 an inquiry from a user terminal apparatus in a short  
time in a manner suitable for user needs.

[0015]

[Means for Solving the Problem]

A help server according to the present invention  
10 is characterized by notice request means for notifying  
its own communication ability to a user terminal  
apparatus which inquires, and communication ability  
instruction means for instructing the helper terminal  
apparatus, which responds to the inquiry, to respond to  
15 the inquiry in a form suitable for user needs in  
accordance with the communication ability notified by  
the user terminal apparatus.

The present invention is also characterized in  
that the user needs include at least one of a  
20 communication fee and information fee.

The present invention also characterized by notice  
request means for requesting to notify a payable fee  
and a terminal ability to the user terminal apparatus  
when an inquiry is made from a user terminal connected  
25 via a network, helper terminal apparatus selection  
means for selecting the helper terminal apparatus  
suitable to respond to the inquiry from the user

terminal apparatus, and session start means for starting a session after connecting the helper terminal apparatus selected by the helper terminal apparatus selection means, and the user terminal apparatus.

5       The present invention is also characterized by storage means for storing contents of a response of the helper terminal apparatus to the inquiry of the user terminal apparatus, in an answer example database.

          The present invention is also characterized by  
10   inquiry contents transmission means for transmitting the inquiry contents of the user terminal apparatus to the helper terminal apparatus selected by the helper terminal apparatus selection means, and helper terminal  
          apparatus information notice means for notifying an  
15   information list of helper terminal apparatuses having a will to replay to the inquiry contents transmitted by the inquiry contents transmission means, to the user terminal apparatus.

          The present invention is also characterized by  
20   history list notice means for notifying information list of a similar inquiry history for the inquiry contents transmitted by the inquiry contents transmission means if the answer example database stores such a similar inquiry history.

25       The present invention is also characterized by fee notice means for notifying an information fee desired by the helper terminal apparatus at the time of

replying from the helper.

The present invention is also characterized by communication ability notice order means for making notify a communication ability of the helper terminal  
5 at the time of reply from the helper.

The present invention is also characterized by fee collecting means for taking a fee collection procedure to the user terminal apparatus.

The present invention is also characterized by fee  
10 payment means for taking a fee payment procedure to the helper terminal apparatus.

The present invention is also characterized by keyword extraction means for extracting keywords from an inquiry when the inquiry is received from the user  
15 terminal apparatus, helper terminal apparatus selection means for selecting at least one of the helper terminal apparatuses suitable for the inquiry from a plurality of helper terminal apparatuses registered beforehand in accordance with the keywords extracted by the keyword  
20 extraction means, and inquiry contents transmission means for transmitting the inquiry of the user terminal apparatus to the helper terminal apparatus selected by the helper terminal apparatus selection means.

The present invention is also characterized by  
25 helper terminal apparatus information notice means for notifying a list of information of helper terminal apparatuses which responds so as to answer to the

inquiry of the user terminal apparatus, to the user terminal apparatus.

The present invention is also characterized by transmission means for transmitting its own payable fee  
5 and terminal ability in accordance with an inquiry of payable fee and terminal ability from a help server.

The present invention is also characterized by data transmission and receipt means for conducting a session with a helper terminal apparatus via the help  
10 server.

[0016]

A help system according to the present invention is characterized by the helper terminal apparatus mentioned above and the user terminal apparatus  
15 mentioned above.

[0017]

A control method of the help system according to the present invention is characterized by a notice request step of notifying its own communication ability  
20 to a user terminal apparatus which inquires, and a communication ability instruction step of instructing the helper terminal apparatus, which responds to the inquiry, to respond to the inquiry in a form suitable for user needs in accordance with the communication  
25 ability notified by the user terminal apparatus.

A control method of the help system according to the present invention is characterized in that the user

needs include at least one of a communication fee and information fee.

A control method of the help system according to the present invention is characterized by a notice  
5 request notice of requesting to notify a payable fee and a terminal ability to the user terminal apparatus when an inquiry is made from a user terminal connected via a network, a helper terminal apparatus selection  
10 step of selecting the helper terminal apparatus suitable to respond to the inquiry from the user terminal apparatus, and a session start step of starting a session after connecting the helper terminal apparatus selected in the helper terminal apparatus selection step and the user terminal apparatus.

15 A control method of the help system according to the present invention is characterized by a storage step of storing contents of a response of the helper terminal apparatus to the inquiry of the user terminal apparatus, in an answer example database.

20 A control method of the help system according to the present invention is characterized by an inquiry contents transmission step of transmitting the inquiry contents of the user terminal apparatus to the helper terminal apparatus selected in the helper terminal  
25 apparatus selection step, and a helper terminal apparatus information notice step of notifying an information list of helper terminal apparatuses having

a will to replay to the inquiry contents transmitted in the inquiry contents transmission step, to the user terminal apparatus.

5 A control method of the help system according to the present invention is characterized by a history list notice step of notifying information list of a similar inquiry history for the inquiry contents transmitted in the inquiry contents transmission step if the answer example database stores such a similar  
10 inquiry history.

A control method of the help system according to the present invention is characterized by a fee notice step of notifying an information fee desired in the helper terminal apparatus at the time of replying from  
15 the helper.

A control method of the help system according to the present invention is characterized by a communication ability notice order step of making notify a communication ability of the helper terminal  
20 at the time of reply from the helper.

A control method of the help system according to the present invention is characterized by a fee collecting step of taking a fee collection procedure to the user terminal apparatus.

25 A control method of the help system according to the present invention is characterized by a fee payment step of taking a fee payment procedure to the helper

terminal apparatus.

A control method of the help system according to the present invention is characterized by a keyword extraction step of extracting keywords from an inquiry  
5 when the inquiry is received from the user terminal apparatus, a helper terminal apparatus selection step of selecting at least one of the helper terminal apparatuses suitable for the inquiry from a plurality of helper terminal apparatuses registered beforehand in  
10 accordance with the keywords extracted in the keyword extraction step, and an inquiry contents transmission step of transmitting the inquiry of the user terminal apparatus to the helper terminal apparatus selected in the helper terminal apparatus selection step.

15 A control method of the help system according to the present invention is characterized by a helper terminal apparatus information notice step of notifying a list of information of helper terminal apparatuses which responded so as to answer to the inquiry of the  
20 user terminal apparatus, to the user terminal apparatus.

[0018]

A storage medium according to the present invention is characterized in that a program to execute  
25 the above-mentioned control method in a computer is recorded.

[0019]

[Embodiment(s) Of The Invention]

[Embodiment(s)]

Embodiments of a help server, a helper terminal apparatus, help system, a control method of the help system and storage medium of the invention will be described with reference to the accompanying drawings. In the overall structure of a help system of this embodiment, as shown in Fig. 8, a help server (801), a plurality of helper terminal apparatuses (802) and a plurality of user terminal apparatuses (803) are interconnected via a network (804) such as the Internet, an intranet, and a public telephone network. Although only one help server (801) is shown for the purposes of convenience, a plurality of help servers may be used.

[0020]

The installation place of a plurality of the help terminal apparatuses (802) may be, for example, a home or satellite office at which a helper works or portable information terminal apparatus and so on. The user terminal apparatus (803) may be a PC installed in a home, an office computer, a portable information terminal apparatus or the like.

[0021]

Fig. 1 shows an example of the structure of the help server in the help system of this embodiment.

The help server of this embodiment is constituted

of a central processing unit (hereinafter called a CPU)  
(102), a main storage device (103) for storing a  
program for controlling the above-mentioned CPU (102),  
a network interface (104) for connection to a network  
5 (105), such as the Internet, an intranet and a public  
telephone network, a speech interface (106), an  
external memory (107) for storing an answer example  
database, an external memory (108) for storing a helper  
management database, and the like, respectively  
10 connected to a system bus (101).

[0022]

The functions stored in the main storage device  
(103) include, for example, a speech  
recognition/synthesis function (103a), a keyword search  
15 function (103b), a message editing/transmission  
function (103c), a fee payment/collection function  
(103d), a session management function (103e), and the  
like. The above-mentioned CPU (102) is controlled by  
using these functions.

20 [0023]

The network interface (104) performs an interface  
control such as a communication protocol control for a  
connection to the network (105) such as the Internet,  
an intranet and a public telephone network. Although  
25 one network (105) is shown for the purposes of  
convenience, it is assumed that the network interface  
(104) supports a plurality of communication protocols

and protocol conversion functions.

[0024]

As shown in Fig. 9, the network interface (104) has a plurality of protocol interfaces (906 to 909) for connections to networks such as the Internet (902), an  
5 ISDN (903), an IMT 2000 network (904) and a PHS network (905). Each protocol interface is connected to the system bus 101 via a data conversion matching unit 910 for converting each data format into a common format  
10 for format matching.

[0025]

In Fig. 9, although specific communication protocols for the help system are shown for the purposes of convenience, the embodiment is not limited  
15 only thereto.

[0026]

The speech interface (106) recognizes voices of a user input from an Internet telephone, a fixed telephone, a portable telephone, or the like connected  
20 via the network interface (104) and converts the voices into digital data, or synthesizes digital data supplied from CPU (102) controlled by the contents of the main storage device (103).

[0027]

25 Although the speech interface (106) and network interface (104) are shown separately in Fig. 1, the speech interface (106) may be included in the network

interface (104).

[0028]

The answer example database (107) stores information such as answers in response to past  
5 inquiries of the user terminals, and when necessary the answer example database (107) is referred to by a program controlled by the contents of the main storage device 103.

[0029]

10 As shown in Fig. 2, the helper management database (108) stores, for example, at least keywords (201) which the helper can cover, access information (202) such as telephone numbers and mail addresses for accessing the helper from the help server.

15 [0030]

Next, with reference to the sequence chart shown in Fig. 3, the operation of the help system of the present invention will be described.

First, an inquiry (301), e.g., "Want to know  
20 various information on lodging houses in Rome", is sent from the user terminal apparatus (31) to the help server (32). As the inquiry methods, a speech telephone, an e-mail, a message transmission on the Web via the network 804, such as the Internet, an intranet  
25 and a public telephone network, and the like may be used.

[0031]

If an inquiry is made through a speech telephone, the speech interface (106 in Fig. 1) of the help server (32) and a program of the speech recognition/synthesis function (103a in Fig. 1) stored in the main storage  
5 device recognize user voices and convert the voices into digital data.

[0032]

In making an inquiry from a user, the user may input (pronounce) the keywords of the inquiry contents  
10 directly. The user may input (pronounce) a long sentence by using the keyword extraction function (103b in Fig. 1).

[0033]

The help server (32) which receives the inquiry  
15 issues an inquiry (302) to the user terminal apparatus (31), for example, as to a payable fee (an approximate maximum fee payable to the information) and abilities of the terminal apparatus (communication abilities of the terminal apparatus such as data transfer speed,  
20 information transfer ability and terminal type), and at the same time, extracts keywords from the inquiry contents of the user by using the keyword extraction function (103b in Fig 1), and searches the helper hitting the extracted keywords (303).

25 [0034]

In the above example, the keywords of "Rome" (including "Italy"), "lodging", "lodging house"

(including "travel") and the like are extracted.

[0035]

If the example of the helper management table in Fig. 2, a helper (204) having a helper number HN0003 and hitting the keyword "Italy" and a helper (203) having a helper number HN0002 and hitting the keyword "lodging" are selected.

[0036]

Eventually the payable fee and communication abilities are notified from the user terminal apparatus (304). In the case of a speech telephone, a program of the speech recognition/synthesis function (103a in Fig. 1) stored in the main storage device of the help server (32) and the speech interface (106 in Fig. 1) synthesize digital data into a speech and reproduce it to make an inquiry.

[0037]

The inquiry (or notice) for the payable fee and abilities of the terminal apparatus may be omitted or performed at the same time of inquiry. However, as in this embodiment, the user is made to input the payable fee different from the inquiry so that it has an intention to make the user confirm again the will of the inquiry.

[0038]

For example, it is assumed that the user terminal apparatus notifies the information such as "up to about

500 Yen" as the payable fee and "speech / 384 kbps  
unrestricted digital communication / TV telephone  
terminal / e-mail" as the abilities of the terminal  
apparatus.

5 [0039]

Upon reception of this, the help server (32) forms  
an inquiry message to be transmitted to the helper  
terminal apparatuses (305) and then transmits the  
inquiry message to the applicable helper terminal  
10 apparatuses (33 (HN0001), 34 (HN0002) and 35) (306).  
[0040]

The message contains the data on the user inquiry  
contents, abilities of the user terminal apparatus and  
the payable fee, but not disclose information capable  
15 of identifying the user terminal apparatus in order to  
protect the privacy of the user.  
[0041]

The method of transmitting the message may be  
group transmission or group mailing, or in the case of  
20 wireless terminal apparatuses or the like, the above  
message may be contained in the extended data field of  
group notice information.  
[0042]

In the case of a speech telephone, a program of  
25 the speech recognition/synthesis function (103a in Fig.  
1) stored in the main storage device of the help server  
(32) and the speech interface (106 in Fig. 1)

synthesize digital data into a speech and reproduce it.  
[0043]

These methods of transmitting may be designated  
for each helper terminal apparatus and registered. In  
5 that case, the message is stored as the information of  
the helper management table in Fig. 2 (205 in Fig. 2).  
[0044]

The help server (32) searches the answer example  
database (107), and picks up the answer history if the  
10 past inquiry similar to the present inquiry exists  
(307). The help server (32), which receives responses  
and presentations of desired fees and desired abilities  
of the terminal apparatus from the helper terminal  
apparatuses (33 and 34) (308), forms a message to be  
15 transmitted to the user terminal apparatus by referring  
to the contents of the messages and the past answer  
examples (309) and transmits a list to the user  
terminal apparatus 831) (310).

[0045]

20 The list transmitted here contains, for example,  
as shown in Fig. 4, information (401) on the HN0001  
helper terminal apparatus (33), information (402) on  
the HN0002 helper terminal apparatus (34), and the  
answer example database information (403) and the like  
25 are listed, but does not disclose any information  
capable of identifying the helper in order to protect  
the privacy of the helper.

[0046]

In the case of a speech telephone, a program of the speech recognition/synthesis function (103a in Fig. 1) stored in the main storage device of the help server (32) and the speech interface (106 in Fig. 1) synthesize the list into a speech and reproduce it to urge to select a desired helper terminal.

[0047]

When the user terminal apparatus (31) selects the helper terminal apparatus from this list and transmits a request of a session (311), the help server (32) judges whether the helper terminal apparatus selected is a pay information provider.

[0048]

If the helper terminal apparatus is the pay information provider, the help server (32) transmits a fee collection procedure request to the user terminal apparatus (312) to make the user terminal apparatus perform the fee collection procedure (313). For example, when the user selects the information (401) of the HN0001 helper terminal apparatus (33) in Fig.4, since the information fee is 500 Yen, the user terminal apparatus (31) performs the fee collection procedure of 500 Yen (313).

[0049]

Upon reception of this, the help server (32) performs certification of the fee collection of the

user terminal apparatus (314), and notifies the helper terminal apparatus of the session request and fee pay notice (315).

[0050]

5           If the helper terminal apparatus (33) returns a session response to the help server (316), the help server transfers the session response (317) to the user terminal apparatus (31) and the session starts (318).

[0051]

10           The session here means that data converted to match the communication ability is transferred between the user terminal apparatus (31) and helper terminal apparatus (33) via the help server (32), and the data is not transferred directly between the user terminal  
15           apparatus (31) and helper terminal apparatus (33).

Therefore, With the help system of this embodiment, the anonymity of the user and helper can be guaranteed.

[0052]

          If the terminal apparatus communication abilities  
20           are different between the user terminal apparatus and the helper terminal apparatus, the network interface (104 in Fig. 1 or Fig. 9) converts the communication protocol (e.g., converts the data of the terminal apparatus having high communication abilities to the  
25           protocol of the terminal apparatus having low communication abilities) so as to assure consistency of mutual data.

[0053]

After confirming the normal start of the session, the help server (32) performs the fee collection process for the user and fee payment process for the helper (319). These processes may be performed before or after the session.

[0054]

If the user desires to obtain more information during the session, then the help server may perform an additional fee collection process for the user terminal apparatus and an additional fee payment process for the helper terminal apparatus. At the time of the fee collection and fee payment, a portion of the fee may be paid to the help server as a mediator commission.

15 [0055]

This may be a system where an advertisement fee is collected from an advertiser by transmitting an advertisement banner or message to the user terminal apparatus or helper terminal apparatus before or after or during the session.

[0056]

If there is a helper (e.g., travel agent, etc. in the case of this example) whose object is the business activity, in the helper terminal apparatus group, this may be a system where a registration fee is collected from this helper. The contents of the session are stored in the answer example database (107). If a

similar inquiry is issued thereafter, the answer example is referred to.

[0057]

However, the user terminal apparatus or helper  
5 terminal apparatus may reject this before or after the  
start of the session or after the end of the session.  
If the session contents are stored in the answer  
example database (107), an additional fee may be paid  
to the helper terminal apparatus as an information  
10 providing fee.

[0058]

Next, with reference to the flow chart shown in  
Fig. 5, the operation of the help server of the help  
system according to the embodiment will be described.  
15 A portion of the detailed description is the same as  
the description of the help system described earlier,  
so that this portion is omitted.

[0059]

First, suppose an inquiry is sent from a user  
20 terminal apparatus to the help server (501). The help  
server received the inquiry transmits information on  
the payable fee (e.g., an approximate maximum fee  
payable to the information) and terminal apparatus  
abilities (data transfer speed, information transfer  
25 ability, terminal apparatus type and communication  
ability of the terminal apparatus) to the user terminal  
apparatus (502). At the same time, the help server

extracts keywords from the inquiry contents of the user  
and by referring to the helper management table (Fig.  
2) searches the helper hitting the extracted keywords  
(S503). Eventually, the help server receives the  
5 notice of the payable fee and terminal apparatus  
abilities from the user terminal apparatus (504).  
[0060]

The help server received this forms an inquiry  
message to be transmitted to the helper terminals  
10 apparatus (505) and then transmits to the applicable  
helper terminal apparatuses (506). The created message  
does not contain information capable of identifying the  
user terminal apparatus in order to protect the privacy  
of the user, although the message contains the data on  
15 the user inquiry contents, abilities of the user  
terminal apparatus and the payable fee.  
[0061]

The help server searches the answer example  
database and picks up the answer history at that time  
20 if there is similar inquiry in the past (507). The  
help server receives responses and presentation of  
messages of desired fees and desired terminal apparatus  
abilities from the helper terminal apparatuses (508).  
By referring to the contents of the messages and the  
25 past answer examples, the help server forms a message  
to transmit to the user terminal apparatus (509) and  
transmits a list to the user terminal apparatus (510).

[0062]

The list to be transmitted does not contain information capable of identifying the helper terminal apparatus in order to protect the privacy of the helper. After the user terminal apparatus selects the  
5 desired helper terminal apparatus from this list (511), the help server judges whether the helper terminal apparatus selected is a pay information provider (512).

[0063]

10 If the helper terminal apparatus is the pay information provider, the help server transmits a fee collection procedure request to the user terminal apparatus (513) to make the user terminal apparatus perform the fee collection procedure (514). Upon  
15 reception of this, the help server performs certification of the fee collection of the user terminal apparatus (515) and notifies the helper terminal apparatus of the session request and fee pay notice (516).

20 [0064]

At this time, if the helper terminal apparatus returns the session response (517) to the user terminal apparatus, the session response is transferred to the user terminal apparatus (518), and the help server  
25 starts the session (520). The session hear means that data converted to match the communication ability is transferred between the user terminal apparatus and

helper terminal apparatus via the help server, and the data is not transferred directly between the user terminal apparatus and helper terminal apparatus.

[0065]

5           Therefore, the anonymity of the user and helper can be guaranteed. After the help server confirms the normal start of the session, the help server performs the fee collection process of the user and the fee payment process for the helper (519). These processes  
10 may be performed before the start of the session or after the end of the session.

[0066]

Next, with reference to the flow chart shown in Fig. 6, the operation of the user terminal apparatus of  
15 the help system according to the embodiment will be described. The user terminal apparatus according to the embodiment may be a PC installed in a home, an office computer, a portable information terminal apparatus or the like.

20 [0067]

A portion of the detailed description is the same as the description of the help system described earlier, so that this portion is omitted. First, a user enters an inquiry from the user terminal apparatus  
25 to the help server (601) and sends it (602). As the inquiry methods, a speech telephone, an e-mail, a message transmission on the Web via the network, such

as the Internet, intranet, and a public telephone network and the like may be used.

[0068]

When the user terminal apparatus receives an  
5 inquiry as to a payable fee (e.g., an approximate  
maximum fee payable to the information) and abilities  
of the terminal apparatus (communication abilities of  
the terminal apparatus such as data transfer speed,  
information transfer ability, terminal type and the  
10 like) from the help server received this (603), the  
user enters a desired fee for the inquiry and the like  
in accordance with the inquiry (604) and transmits them  
(605). For a communication ability, the user terminal  
apparatus may notify the help server of ability of its  
15 own terminal apparatus automatically or the user may be  
set it manually.

[0069]

Eventually the user terminal apparatus receives  
the list of information on helper terminal apparatuses  
20 and information on the answer example database from the  
help server (606). The user selects the desired helper  
terminal apparatus from this list (607) and transmits a  
session request (608).

[0070]

25 The help server judges whether the helper selected  
is a pay information provider (609). If the helper  
selected is a pay information provider, a fee

collection procedure request is transmitted from the help server (610), and the user performs the fee collection procedure (611). After the user terminal apparatus receives a session response (612), the  
5 session starts (521).

[0071]

Lastly, with reference to the flow chart shown in Fig. 7, the operation of the helper terminal apparatus of the help system according to the embodiment will be  
10 described. The installation place of the help terminal apparatus may be, for example, a home or satellite office at which a helper works or portable information terminal apparatus and so on. A portion of the detailed description is the same as the description of  
15 the help system described earlier, so that this portion is omitted.

[0072]

First, an inquiry message is transmitted from the help server (701). The inquiry message does not  
20 disclose information capable of identifying the user in order to protect the privacy of the user, although the inquiry message contains the information on the user inquiry contents, abilities of the user terminal apparatus and the payable fee.

25 [0073]

The method of transmitting the message may be group reception or group mailing, or in the case of

wireless terminal apparatuses or the like, the above message may be contained in the extended data field of group notice information. These methods of sending the message may be designated and registered beforehand for  
5 each helper terminal apparatus, and in that case stored as the information of the helper management table in Fig. 2 (205 in Fig. 2)

[0074]

If the helper believes that he can answer the  
10 inquiry received, the helper enters a response message, desired fee and the like (702) and transmits them (703). Abilities of the helper terminal apparatus are transmitted to the help server after the helper terminal apparatus notifies abilities of its own  
15 terminal apparatus automatically or the helper manually sets (703).

[0075]

After that, the operation is branched into two types (700) and the helper selected by the user  
20 receives from the help server the session request and fee payment notice (704). The helper not selected by the user receives an inquiry completion notice from the help server (705). This reception of the inquiry completion notice may be omitted.

25 [0076]

Upon reception of the session request and the fee payment notice (704), the helper confirms the fee

information and the like, and thereafter enters a session response (706) to transmit (707) and enters into the session status (708).

[0077]

5           Although the embodiment describes specific examples for the purposes of convenience, the invention is not limited only to the above-described embodiment. For example, a desired information processing apparatus may be used as the user terminal apparatus or helper  
10 terminal apparatus, and a desired communication method may be used as the communication method for network connection.

[0078]

(Other Embodiments of the Invention)

15           The invention is also applicable to a system having a plurality of apparatuses (e.g., a host computer, an interface apparatus, a reader, a printer and the like) or to a single apparatus.

[0079]

20           The scope of the invention contains also the case wherein software program codes realizing the function of each embodiment described above are supplied to a computer (CPU or MPU) of the apparatus or system connected to various devices realizing the embodiment  
25 function, and the computer operates the devices in accordance with the stored programs.

[0080]

In this case, the software program codes themselves realize the embodiment function. Therefore, the program codes themselves and means for supplying the program codes, e.g., a storage medium storing the program codes, constitute the present invention. The storage medium for storing such program codes may be a floppy disk, a hard disk, an optical disk, a magneto optical disk, a CD-ROM, a magnetic tape, a nonvolatile memory card, a ROM or the like.

10 [0081]

It is obvious that the program codes are included in the embodiment of the invention, wherein not only the computer executes the supplied program codes to realize the embodiment function but also the program codes in cooperation with an OS (operating system) running on the computer or with another application or the like realize the embodiment function.

[0082]

It is obvious that the scope of the invention also contains the case wherein the functions of each embodiment can be realized by writing the program codes into a memory of a function expansion board inserted into a computer or of a function expansion unit connected to the computer, and thereafter by executing a portion or the whole of actual processes by a CPU of the function expansion board or function expansion unit.

[0083]

[Effect of the Invention]

As being described so far, the present invention can provide a help system which can send back a  
5 response to an inquiry from a user terminal apparatus in a short time, efficiently, and a format satisfying user needs.

Especially, a help system according to the present invention provides an effect that if a plurality of  
10 helpers having various communication abilities are ready to answer, the user can select the helper freely and, therefore, communication abilities of information apparatuses can be fully utilized.

Furthermore, in the help system of the present  
15 invention, charging systems of communication fee, information fee, and the like can be varied in accordance with these various communication abilities and response contents, and the users and helpers can set or select the charging systems freely. This makes  
20 it possible to enhance service performance, increase the number of registered helpers and users, and then increase profitability of the help system.

[Brief Description of the Drawings]

[Fig. 1] A diagram showing the structure of a  
25 help server in an embodiment of the present invention.

[Fig. 2] A diagram showing an example of a helper management table in a help server in the embodiment of

the present invention.

[Fig. 3] A sequence chart illustrating the control of a help system in the embodiment of the present invention.

5 [Fig. 4] A diagram showing a list of answers transmitted to a user terminal apparatus in the embodiment of the present invention.

[Fig. 5] A flow chart illustrating the control of the help server in the embodiment of the present  
10 invention.

[Fig. 6] A flow chart illustrating the control of the user terminal apparatus in the embodiment of the present invention.

[Fig. 7] A flow chart illustrating the control of  
15 a helper terminal apparatus in the embodiment of the present invention.

[Fig. 8] A diagram showing the overall structure of the help system in the embodiment of the present invention.

20 [Fig. 9] A diagram showing an example of the structure of the help server of the present invention.

[Fig. 10] A diagram showing the overall structure of a conventional help system.

[Description of Reference Numerals or Symbols]

25 101 System bus  
102 CPU  
103 Main storage device

	104	Network interface
	105	Network
	106	Speech interface
	107	Answer example database
5	108	Helper management database
	801	Help server
	802	Helper terminal apparatus
	803	User terminal apparatus
	804	Network
10	104	Network interface
	902	Internet
	903	ISDN
	904	IMT 2000 network
	905	PHS network
15	906 to 909	Protocol interface
	910	Data conversion matching unit
	101	System bus

[Name of Document] Drawings

[Fig.1]

103: main storage device

103a: speech recognition/synthesis function

5 103b: keyword search function

103c: message editing/transmission function

103d: fee payment/collection function

103e: session management function

104: network I/F

10 106: speech I/F

107: answer example DB

108: helper management DB

[Fig.2]

15 201: keyword

202: access information

205: transmission method

C 言語: C language

パソコン: personal computer

20 宿泊: lodgment

旅行会社: travel agency

イタリア: Italia

渋谷: Shibuya

温泉: hot spring

25 電話番号: phone number

メールアドレス: mail address

ページャー: pager

メール: mail

電話: phone

[Fig.3]

- 5 31: user terminal
- 32: help server
- ヘルパ端末群: helper terminal group
- 301: inquiry
- 302: inquire of payable fee and terminal ability
- 10 303: extract keyword and select helper
- 304: notify payable fee and terminal ability
- 305: edit message
- 306: transmit inquiry and payable fee
- 307: search answer example DB
- 15 308: respond, present desired fee, and terminal ability  
list
- 309: edit message
- 310: transmit response result, fee and terminal ability  
list
- 20 311: session request
- 312: fee collection procedure request
- 313: fee collection procedure
- 314: certification
- 315: session request and payment notification
- 25 316: session response
- 319: helper ① payment

[Fig.4]

メッセージ : message

端末の通信能力 : communication ability of terminal

料金 : fee

- 5   ホテル情報他種あります写真もあります : various hotel  
information is provided, and photo is also provided  
TV電話にて : by TV phone  
先週行って来ました : I went last week.  
履歴 : history

- 10   TV電話 : TV phone  
音声電話 : voice phone  
電子メール : E-mail  
無料 : free

15   [Fig.5]

スタート : start

501: receive inquiry

502: transmit inquiry of payable fee and terminal  
ability

- 20   503: extract keyword and select helper

504: receive payable fee and terminal ability

505: edit message

506: transmit inquiry and payable fee

507: search answer example DB

- 25   508: receive response, desired fee and terminal ability

509: edit message

510: transmit response result, DB history, fee and

terminal ability list

511: receive session request

512: pay?

無料: free

5 有料: pay

513: transmit fee collection request

514: receive fee collection response

515: certification process

516: transmit session request (and notice of payment)

10 517: receive session response

518: transmit session response

519: fee collection and payment process

520: session status

エンド: end

15

[Fig.6]

601: input inquiry

602: transmit inquiry

603: receive inquiry fo payable fee and terminal

20 ability

604: input desired fee

605: transmit payable fee and terminal ability

606: receive response result, answer example history,  
fee and terminal ability list

25 607: input designated terminal

608: transmit session request

609: fee

610: receive fee collection request  
611: transmit fee collection response  
612: receive session response  
613: session status

5

[Fig.7]

701: receive inquiry and payable fee  
702: input response and desired fee  
703: transmit response, desired fee, and terminal  
10 ability list  
704: session request and note of payment received ?  
705: receive note of inquiry completion  
706: input response  
707: transmit session response  
15 708: session status  
700: branch

[Fig.8]

801: help server  
20 802A: helper terminal  
803: user terminal

[Fig.9]

104: network I/F  
25 902: Internet  
903: ISDN  
904: IMT200 network

905: PHS network

906: protocol I/F

910: data conversion matching unit

5 [Fig.10]

801': help server

802': helper terminal

803': user terminal

[Name of the Document] Abstract

[Abstract]

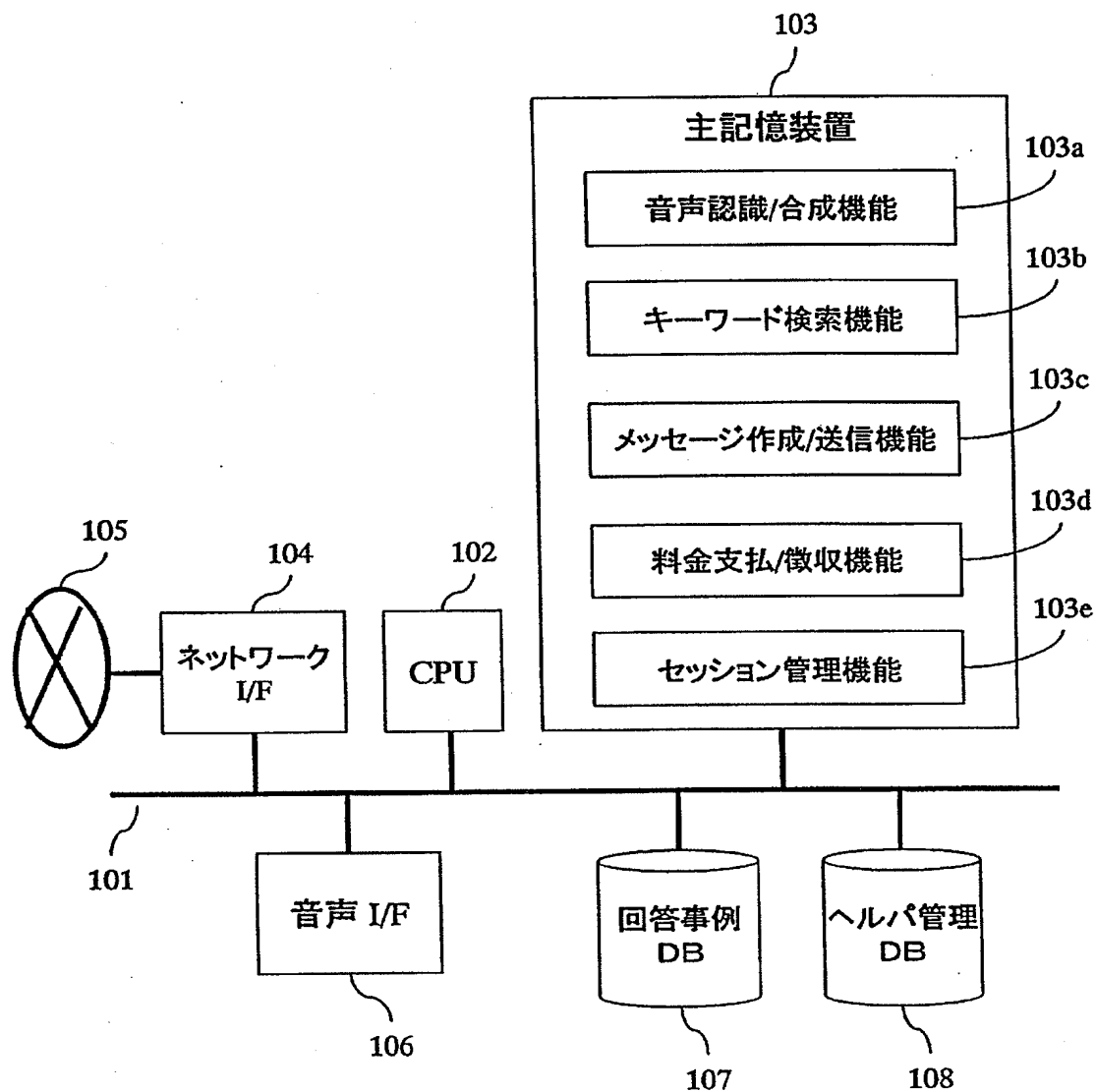
[Problem(s)] It can provide a help system which can  
send back a response to an inquiry from a user terminal  
5 apparatus in a short time, efficiently, and a format  
satisfying user needs.

[Means for Solving the Problem(s)] A help server  
comprises notice request means for notifying its own  
communication ability to a user terminal apparatus  
10 which inquires, and communication ability instruction  
means for instructing the helper terminal apparatus,  
which responds to the inquiry, to respond to the  
inquiry in a form suitable for user needs in accordance  
with the communication ability notified by the user  
15 terminal apparatus, thereby being able to select  
charging systems of communication fee, information fee,  
and the like in accordance with various communication  
abilities and reply contents.

[Elected Drawing] Fig. 1

【書類名】 図面

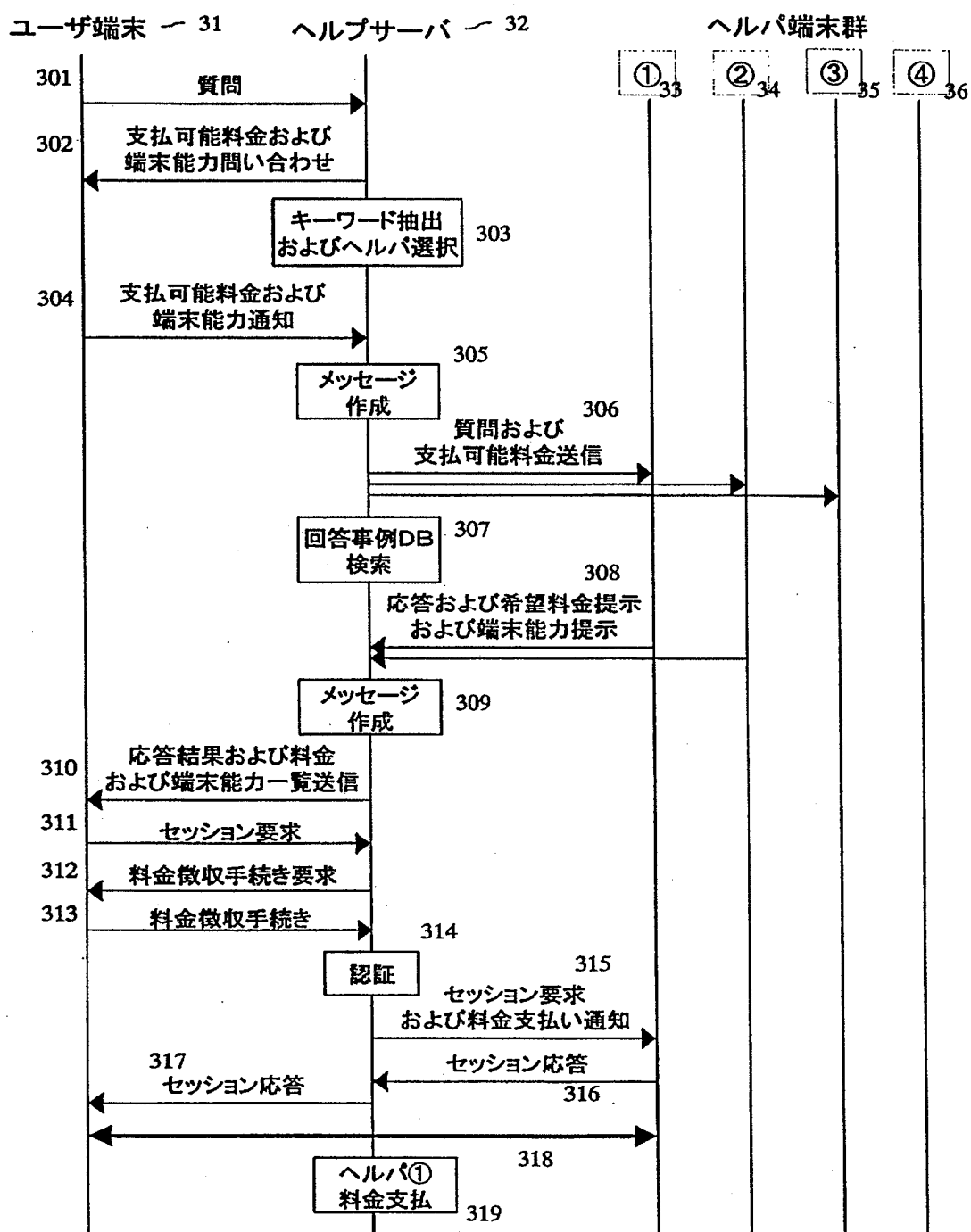
【図1】



【図2】

HN	201 キーワード	202 アクセス情報	205 送信方法 . .
0001	C言語 パソコン HTML : :	電話番号 メールアドレス URL : :	ページャー
203 0002	宿泊 旅行会社 : :	電話番号 メールアドレス URL :	メール
204 0003	イタリア 渋谷 温泉 : :	電話番号	電話

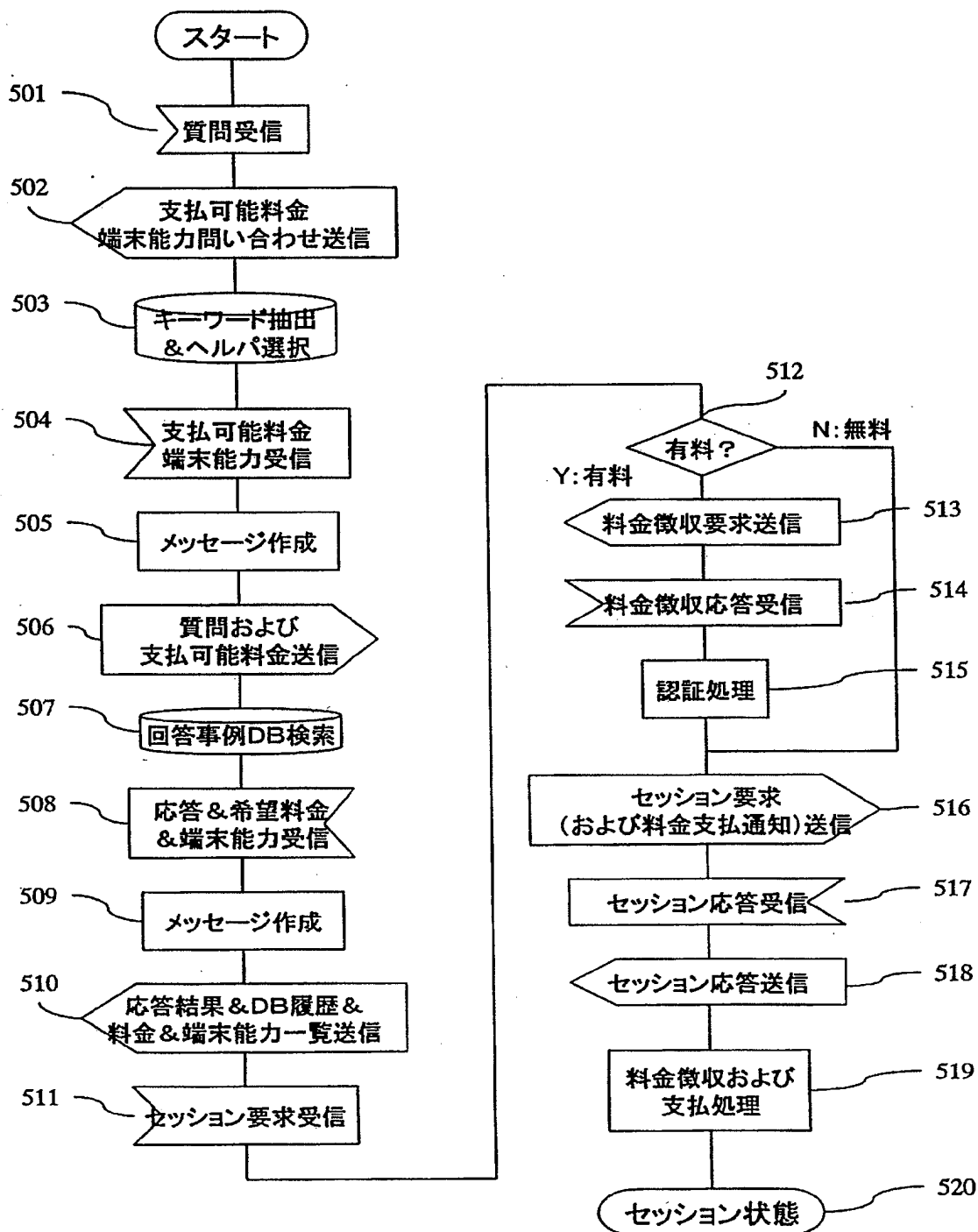
【図3】



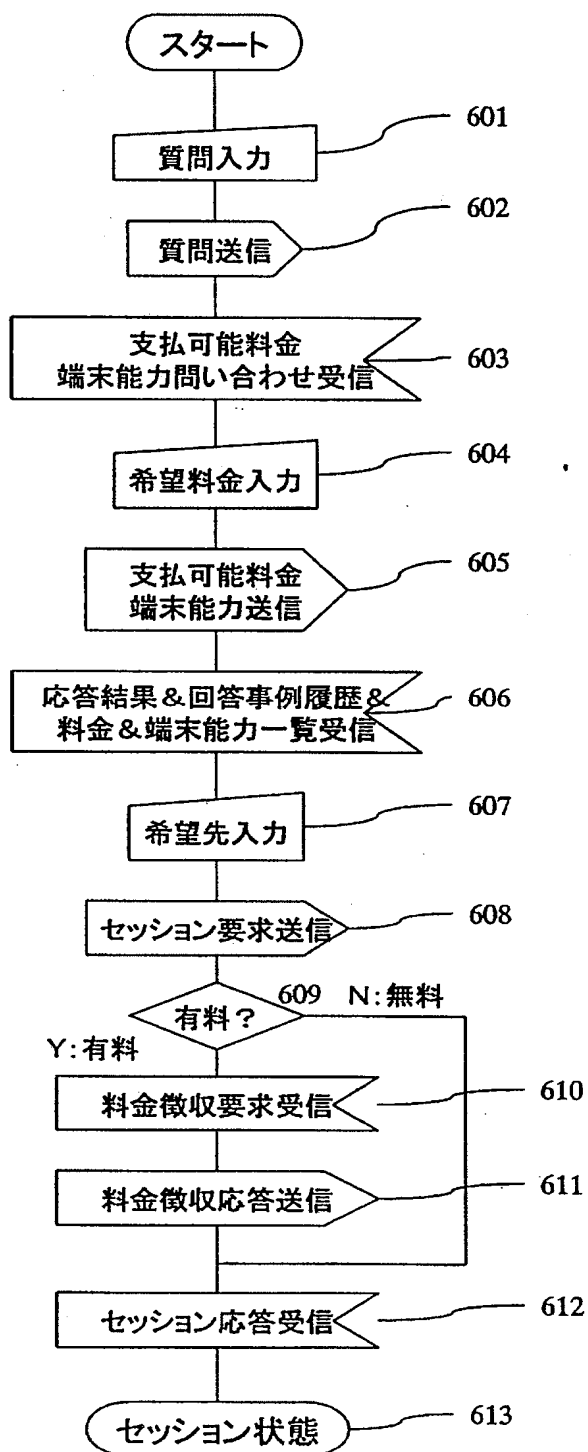
【図4】

401	CHK	メッセージ	端末能力	料金
	<input type="checkbox"/>	ホテル情報 多種あります 写真もあります。 TV電話にて 対応可能です。	TV電話 音声電話 電子メール	¥300
402	<input type="checkbox"/>	先週 行ってきました。	音声電話	無料
403	<input type="checkbox"/>	履歴(2000-03-30)	電子メール	無料

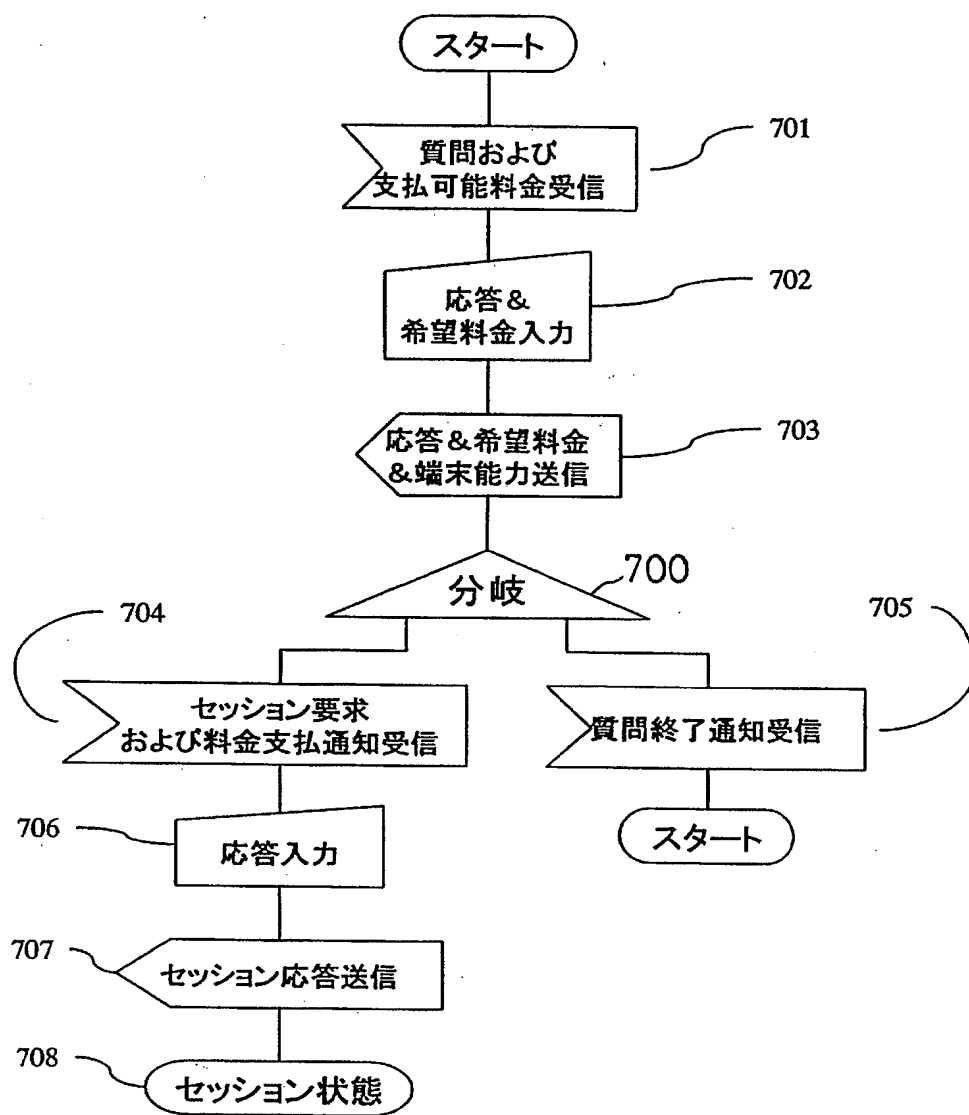
【図5】



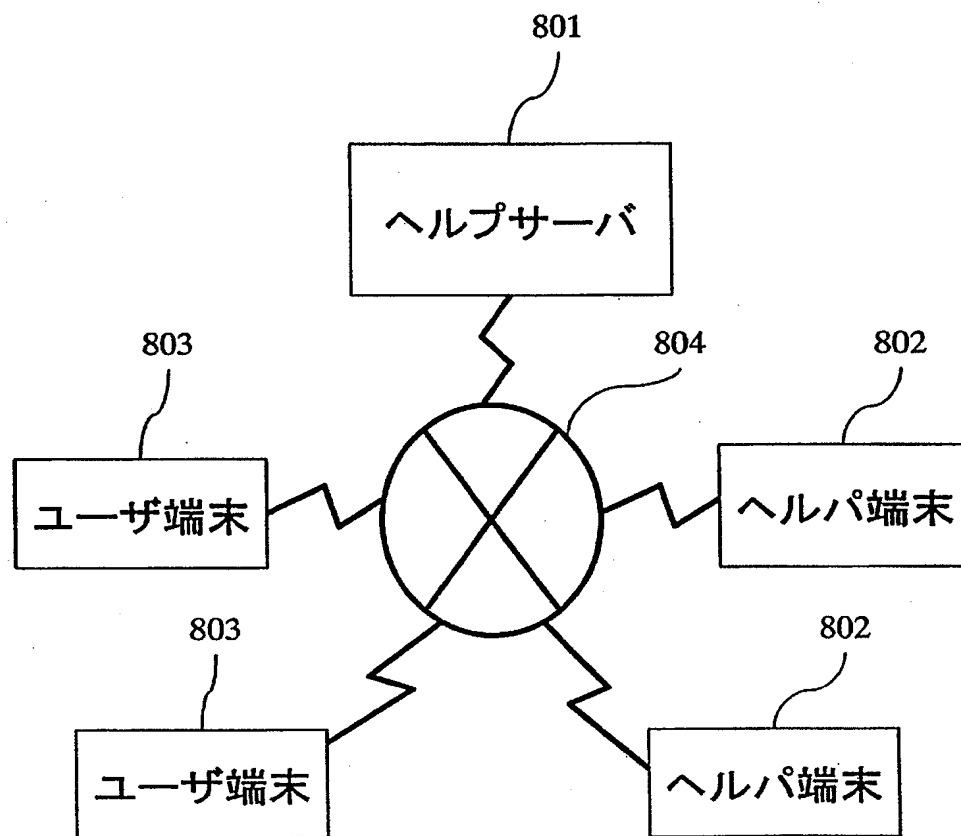
【図6】



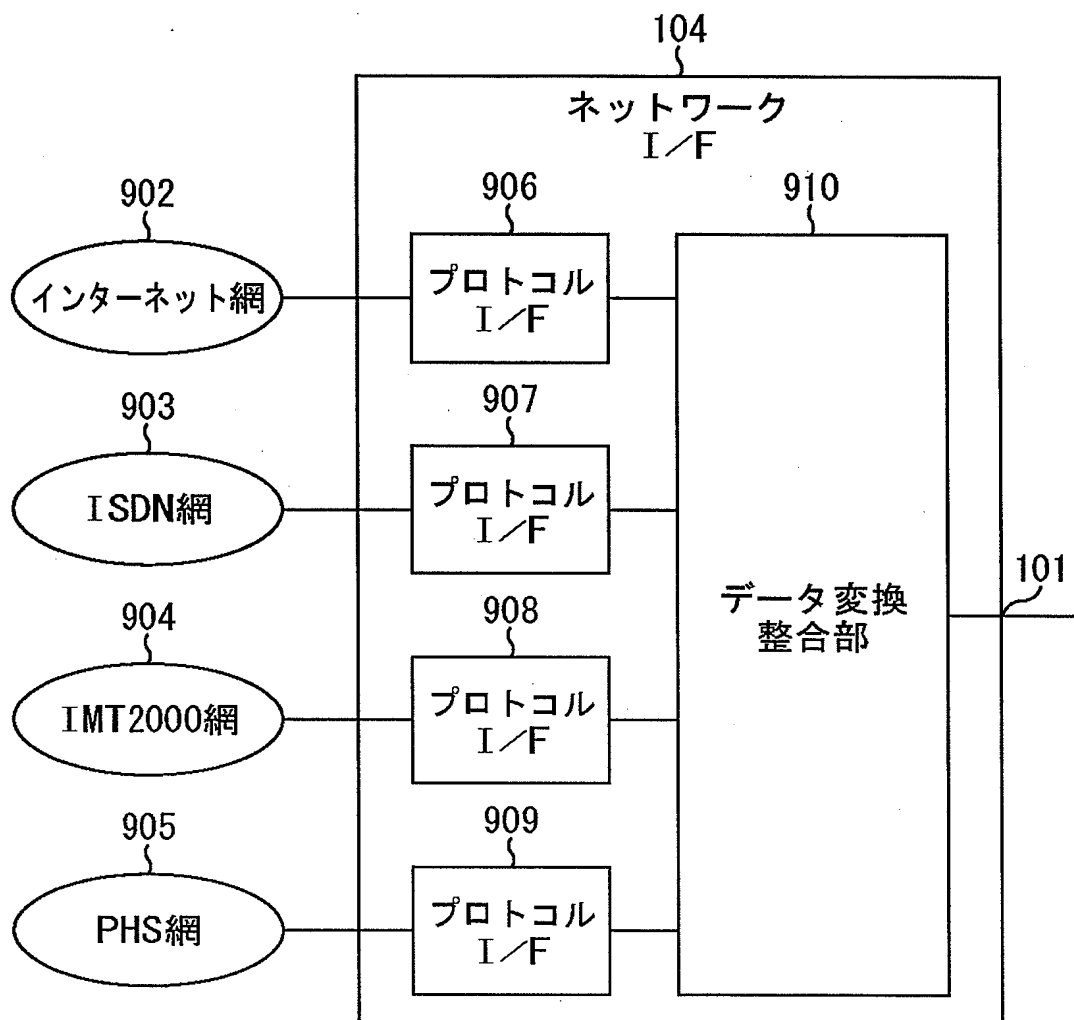
【図7】



【図８】



【図9】



【図１０】

